

CLAIMS

1. A composition comprising the components:

- (a) a hydrophilic polymer having a number average molecular weight less than 30,000;
- (b) a hydrophobic polymer having a number average molecular weight more than 40,000;
- (c) pigment; and
- (d) liquid medium.

2. A composition according to claim 1 wherein component (a) has a number average molecular weight less than 20,000.

3. A composition according to claim 1 wherein component (b) has a number average molecular weight greater than 60,000.

4. A composition according to claim 1 wherein component (a) and component (b) are each independently selected from the group consisting of acrylic polymers, polyurethanes and polyesters.

5. A composition according to any one of the preceding claims wherein the hydrophobic polymer comprises a hydrophobic acrylic polymer and a hydrophobic polyurethane polymer.

6. An composition according to any one of the preceding claims wherein the hydrophilic polymer is hydrophilic by virtue of the presence of ionic and/or non-ionic water dispersing groups in the hydrophilic polymer.

7. A composition according to any one of the preceding claims wherein the composition has a total concentration of divalent and trivalent metal ions below 5000 parts per million by weight relative to the total weight of the composition.

8. A composition according to any one of the preceding claims having a viscosity less than 100cp at 20 °C.

9. A composition according to any one of the preceding claims wherein

- (i) the composition has a viscosity less than 100 cp at 20°C;
- (ii) the composition has been filtered through a filter having a mean pore size below 10µm; and
- (iii) the composition has a total concentration of divalent and trivalent metal ions

below 5000 parts per million by weight relative to the total weight of the composition.

10. A composition according to any one of the preceding claims which comprises:

- (i) from 0.1 to 10 parts of component (a);
- (ii) from 0.1 to 10 parts, more preferably 1 to 10 parts of component (b);
- (iii) from 0.1 to 15 parts of component (c); and
- (iv) from 75 to 98 parts of component (d)

wherein all the parts are by weight and the parts by weight of (i) + (ii) + (iii) + (iv) add up to 100.

11 A composition according to any one of the preceding claims wherein the pigment is selected from yellow, red, orange, green, violet, indigo, blue and/or black organic and/or inorganic pigment.

12. A composition according to any one of the preceding claims wherein the pigment is a carbon black pigment.

13. A composition according to claim 12 wherein the carbon black pigment carries ionic groups.

14. A composition according to claim 1 with the proviso that when components (a) and (b) are both acrylic polymers, components (a) and (b) have been prepared separately.

15. A composition according to claim 1 with the proviso that when components (a) and (b) are both acrylic polymers and component (b) is prepared in the presence of component (a) then the Tg of component (b) is greater than 40°C.

16. A composition according to claim 15 where the Tg of component (b) is greater than 45°C.

17. An ink comprising a composition according to any one of the preceding claims.

18. Use of a composition according to claims 1 to 16 as an ink for ink-jet printing.

19. A process for printing an image on a substrate comprising applying thereto composition according to any one of claims 1 to 16 by means of an ink-jet printer.

20. An ink-jet printer cartridge containing a composition according to any one of claims 1 to 16.

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